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ABSTRACT

The purpose of this study was to demonstrate the feasibility of conditioning subjects to believe expectancy statements, and to demonstrate the effects of the conditioning on persistence and persistence of attention. A review of related research on suggestion, on cognitive dissonance, and on conditioning is included. The subjects for the experiment were first graders; the three dimensions of the factorial design were conditioning of expectancy, type of expectancy statement, and ability group. Two dependent measures were used: persistence and persistence of attention. Results show that significant differences were found between the conditioned-to-believe-low-expectancy group and the conditioned-not-to-believe-low-expectancy group on measures of persistence of attention; however, these differences were not in the hypothesized direction, suggesting that conditioning the subjects to an expectancy statement might have had more effect than avoidance of failure. References are included. (Author/SES)

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THE EFFECTS OF PRIOR CONDITIONING TO EXPECTANCY STATEMENTS ON PERSISTENCE AND PERSISTENCE OF ATTENTION

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Chapter I

Introduction

Most teachers make comments to their students about the performance expected of them. Teachers frequently make statements such as, "I think you will do much better today, John," or "You'll find this paper harder, Jane." Since such expectancy statements are used in the classroom, it is useful to gain some understanding of how expectancy statements affect the performance of children.

Early research on suggestion indicates that people do tend to perform in the manner suggested to them (Bell, 1908; Jones, 1910; Coffin, 1941). If one can assume that suggestion and expectancy are the same phenomenon the studies would support the hypothesis that individuals would be effected by an expectancy statement. However, this early research on suggestion fails to offer any explanation for the mechanism behind expectancy. The authors of more recent research on expectancy suggest that Festinger's theory of cognitive dissonance can be used to explain how expectancy works (Aronson & Carlsmith, 1962; Cottrell, 1965; Carlsmith, Darley, & Aronson, 1963; Carlsmith & Aronson, 1963; Sampson, 1965). An examination of these studies, suggests that a subject's responses to the expectancy statements may be a function of previous conditioning.

The purpose of this study, is to demonstrate the feasibility of conditioning subjects to believe expectancy statements, and to demonstrate the effects of the conditioning on persistence and persistence of attention.

Chapter II

Related Research

Some insights into expectancy may be gained through an investigation of the early research on suggestion (Bell, 1908: Jones, 1910; Coffin, 1941). The results indicate that individuals are suggestible, that they do tend to perform in the manner suggested to them.

Coffin (1941) explained suggestion as the condition where E sets up a situation offering possibilities of a right, or appropriate, and a wrong, or inappropriate response. The E then tells the S to make the inappropriate response. If the S, when given the choice, makes the inappropriate response, then he is suggestible. If he makes the appropriate response, then he is non-suggestible and said to show a thought or critical response.

Supporting the idea that individuals are suggestible, Bell (1908) found that an auditory suggestion influenced the reproduction of triangles more than a visual suggestion did. He also found large individual differences in suggestibility. Jones (1910) also found that suggestion had an effect on performance. On a psychomotor task, performances made after a suggestion, whether it was positive or negative, showed greater error and greater variability than those made without any suggestion. The performances made under suggestions of ability ("You are now able.") almost always had less error and variability than those made under suggestions of inability ("You are now unable."). Another variable affecting suggestion is the degree of task ambiguity. Coffin (1941) concluded that relative suggestibility increases directly with increasing degrees of attribute ambiguity.

Coffin reviewed previous developments in the area of

expectancy. One of the factors he felt influenced suggestion was its source, and the degree of regard S held for the source. He also felt that suggestibility was higher in children than in adults. Also, one individual may show varying degrees of suggestibility from one task to another. Several other factors (Young, 1931) which may be important in considering suggestion are the content of the suggestion, the source of the suggestion, the characteristics of the source, the relation of the source to the S, permanent characteristics of S, temporary characteristics of S, what the suggestion appeals to, and the method by which the suggestion is communicated.

This early research indicates that individuals are suggestible. However, few of the studies offer any explanation for how suggestion works in an individual. Assuming that teacher expectancy and suggestion are really the same phenomenon, then one possible explanation of the mechanism behind suggestion is cognitive dissonance.

Cognitive Dissonance

Festinger's theory of cognitive dissonance states that if a person expects to do well (or to do a particular task) and does, he will experience consonance. If he expects to do well and does not, he will experience dissonance. If he expects to do poorly and does, he will experience consonance. If he expects to do poorly and does well, he will experience dissonance. The dissonance an individual experiences can be measured by his attempts to reduce it. The authors of several studies (Aronson & Carlsmith, 1962; Cottrell, 1965; Carlsmith, Darley, & Aronson, 1963; Carlsmith & Aronson, 1963; Sampson, 1965) claim that their results indicate that cognitive dissonance may be an explanation for Ss performing according to an

expectancy statement.

Aronson and Carlsmith in 1962 (replicated by Cottrell, 1965) found that Ss would strive to have their performance on a rating test conform to their expectancy. After each set of 20 ratings, each S was given information concerning his performance. One half received a constant high score while one half received a constant low score. It was assumed that if an individual received a constant score, then he would develop an expectancy for this level of performance. After the fifth section of the test, one half of each group was given low scores. The Ss were then given a chance to change their answers on the last test by doing it over. The results show that there was a tendency to conform to the expectancy that had been developed during the first four tests. The number of answers each S changed from first performance to second on the fifth test shows the discomfort with the previous score. Those Ss whose fifth test results differed from what they had expected changed their answers significantly more than the other Ss, ($p < .01$), showing greater discomfort with their performance. The authors feel that this discomfort may be due to the dissonance resulting from expecting a high score (or low score) and receiving a low score (or high score). The fact that the Ss changed their answers, when given the chance to retake the test, shows that they were trying to reduce the dissonance.

Waterman and Ford (1965) replicated the Aronson and Carlsmith study (1962). Waterman and Ford hypothesized that the successes given the high expectancy group may have caused them to find a consistent method or rule for making their choices. Thus they would have a better ability to recall their answers after the fifth test. Similarly, the low scores received by the other group may have caused them to become less interested in the task, to pay less attention to their choices and therefore to be unable to recall them.

To test this, on the readministering of the fifth test, Waterman and Ford required the Ss to mark their previous response and to mark the one they now believed to be correct. The results showed that the high expectancy Ss were better able to recall their fifth trial choices than the low expectancy Ss ($p < .01$). Waterman and Ford concluded that all groups in Aronson and Carlsmith's study (1962) were not equal in their ability to recall their previous responses. It is possible that requiring the Ss to remember their responses may have caused more Ss to recall more efficiently. These results would suggest that the low expectancy Ss in Aronson and Carlsmith's study (1962) could not have purposely changed their answers the second time they took test five in order to reduce their dissonance. According to Waterman and Ford, the responses that the Ss changed were due to chance since they could not recall their original answers.

Additional research on expectancy has been conducted based on predictions and interpretations from the cognitive dissonance theory applied to expectancy. One possible interpretation of dissonance theory applied to expectancy was given by Carlsmith, Darley, and Aronson (1963). They state that if cognitive dissonance is an explanation for expectancy, then if an individual expects to do a task, whether pleasant or unpleasant, and does it, consonance will result. Therefore, if an individual is told he will do a certain task, whether pleasant or unpleasant, and he is given the time to internalize that expectancy, then, when given a choice between that task and another, he should choose the task he was told he would perform. This tendency would be strongest when the individual is given time to develop the expectancy, to anticipate the dissonance he would feel if he did not choose the task, to prepare himself psychologically for the task, and to adapt to anxiety.

The results of the Carlsmith, Darley, and Aronson study (1963) support their interpretation of cognitive dissonance. The Ss were required to perform one of two tasks, one pleasant and one unpleasant. The E randomly told one half of the Ss they would perform the pleasant task, and one half the unpleasant task. After a period of waiting (half of each group waited 20 min., half 7 sec.), the E told each S that he had made a mistake, that it made no difference to him, and that the S could choose the task. The Ss chose the task that had been expected of them significantly more often than the other task. The authors conclude that if an individual expects to do a task, the chances that the task will be chosen are increased.

Foxman and Radtke (1970) also support Carlsmith, Darley, and Aronson's (1963) interpretation of cognitive dissonance. They found that, in the group where there was a 10 minute delay and in the group where Ss received shocks for 10 minutes, Ss chose the aversive task significantly more often than the Ss in groups with no delay and in the groups which solved problems for 10 minutes. The no delay and the problem solving groups had no opportunity to anticipate the dissonance that would result if they failed to choose the aversive task. The 10 minute delay and the shock group both had the opportunity to anticipate dissonance, similar to Carlsmith, Darley, and Aronson's (1963) delay groups.

Another interpretation of dissonance theory applied to expectancy suggests that if an individual expects X and experiences Y, dissonance will occur and Y will seem more unpleasant. This aspect of cognitive dissonance is supported in a study by Carlsmith and Aronson (1963). The E gave a physical signal to indicate whether a solution would taste bitter or sweet. The Ss stated orally how they thought the solution would taste, and then they tasted the solution. After tasting each solution, the Ss marked the degree of

bitterness or sweetness as compared to a standard scale. The E told the S whether or not he had been correct in his prediction of bitter or sweet. The E gave the sign correctly for the drinks until the last trial. Before the last drink, he gave the sign for the drink that was opposite of the one there. The Ss would win 50 cents for each correct prediction and lose 1 dollar for each incorrect prediction. The authors found that there was no effect on taste if the S was incorrect but had not yet learned the signals and thus had no strong expectancy. After the S had learned the signals, he could then predict from the motions of E which solution he was to drink, and thus developed a strong expectancy. On the last trial, then, the Ss had a strong expectancy which was discomfirmed. They saw the bitter solutions as more bitter and the sweet as less sweet. Therefore, the stronger the expectancy, the greater the negative effect following disconfirmation.

Sampson (1965) did a replication and extension of Carlsmith and Aronson's study (1963). Sampson felt that if an expectation were disconfirmed in the direction of one's motivations and desires, then one would not feel unpleasantness. Instead of paying Ss for a correct prediction and fining them for an incorrect one, Sampson paid one half of the Ss 25 cents for each bitter solution, and the other half he paid 25 cents for a sweet solution. The results supported the idea that the disconfirmation of one's expectation would be pleasant only when it involved an event which was desired. The sweet solution, which was desired, was rated as less sweet when Ss expectancy was not confirmed, regardless of whether or not S was being paid for the sweet solution, as Carlsmith and Aronson had found (1963). However, the ratings of the bitter solution, which was not desired, were not affected by payment or expectancy. The authors felt that Ss had an intrinsic desire for sweet rather than bitter.

The disconfirmation of the expectancy was noticed more against a pleasant rather than an unpleasant background. An already unpleasant event, when made a little more unpleasant by disconfirmation, possibly was not seen as more unpleasant against an already unpleasant background. In Carlsmith and Aronson's (1963) study, the bitter might have been rated as more bitter by the Ss because the disconfirmation of the expectancy was made even more unpleasant due to the fine.

Watts (1965) in investigating his interpretation of dissonance as applied to expectancy, told all Ss that they would participate in a painful electrical stimulation of the tongue to study the electrophysiology of taste. An anesthetic was made optional for half and mandatory for half of the Ss. It was pleasant tasting for half and unpleasant for the other half. All Ss then were told that, due to an unexpected event, they would not be able to complete the experiment. According to dissonance theory, Watts expected the Ss would find a way to relieve the dissonance experienced due to a disconfirmed expectancy. He felt that dissonance theory would also predict that cognitive balance could be regained by overevaluating the worth of the experiment, by persuading others that the experiment was valuable and worth participating in, by showing greater liking for the E at the end of the experiment, or by exaggerating the painfulness of the shock. None of these interpretations was supported. Thus Watts concluded that his results failed to support a dissonance interpretation of expectancy.

Conditioning

Further examination of some of the studies claiming cognitive dissonance as an explanation for expectancy indicate that the Ss were conditioned by the E to the expectancy statements. For example, the studies by

Aronson and Carlsmith (1962), Cottrell (1965), and Carlsmith and Aronson (1963) all seem to include conditioning of the Ss to an expectancy statement, which could also explain the Ss performance. Like the rat, which must be conditioned to respond in a set way to a light, children may need to be conditioned to respond in a desired way to an expectancy statement.

In Aronson and Carlsmith's 1962 study (replicated by Cottrell, 1965), the Ss were either consistently told during four trials that they had received a high score, or consistently told they had received a low score. They predicted therefore, that by the last trial, the Ss might have internalized the expectancy that they would do well on the next trial if they had received high scores. If they had received low scores, they would probably have developed an expectancy to do poorly on the next test. If the Ss were conditioned, then the expectancy statement would become the conditioned stimulus which would elicit the behavior of the Ss.

In the study by Carlsmith and Aronson (1963), the Ss had several trials in which to learn the signals for taste, and to be conditioned to expect the liquid to be bitter or sweet based on the signals. Before the S learned the signals, and before he had been conditioned to expect a certain taste, disconfirmation had no effect on taste. Once he had been conditioned to expect a certain taste, and his expectancy was disconfirmed, then the bitter tasted more bitter, and the sweet less sweet.

It would appear that before Ss will conform to an expectancy, they may need to be conditioned to believe and internalize expectancy statements. If this theory is true, then it should be possible to condition children to do better after a high expectancy statement and to do poorer after a low expectancy statement. Conditioning should occur

if, after a high expectancy statement, the child receives high feedback, and if, after a low expectancy statement, he receives low feedback.

Since how well a child does a task (persistence of attention) and his initiative in pursuing a task by choice (persistence) are both important factors in the school, the effects of conditioning an expectancy statement on both variables should be studied. Using the operant conditioning model, Moore and Holmes (1970) found that Ss who were positively reinforced were more persistent than those who were punished. On the measure of persistence of attention, the failure group performed on a higher level than the success group. These results were attributed to the hypothesis that avoiding failure might be more motivating than obtaining success. Moore and Holmes' results could be used to predict the performance of Ss on persistence or persistence of attention when the Ss receive an expectancy statement before the performance of a task. The failure condition's results could be used to predict the results of the low expectancy group; the success group's results could be used to predict the results of the high expectancy condition.

If Ss do tend to be suggestible and perform according to an expectancy statement, and if conditioning does tend to increase the probability that this performance will occur, then it should be possible to condition Ss to expectancy statements. Since persistence and persistence of attention are important variables in school, they could be used to measure the effects of conditioning to expectancy statements.

Definitions

Persistence is the number of tasks a student will voluntarily complete following training.

Persistence of attention is the level of student performance on a required task, following the training period.

Expectancy statements are verbal statements made to the student prior to completing a task which predicts the student's performance on a task.

Hypotheses

1. There will be no significant differences in persistence or persistence of attention between the conditioned to believe and conditioned not to believe groups.

2. a) The high expectancy group's performance will be greater than the performance of the low expectancy group on measures of persistence.

b) The high expectancy group's performance will be lower than the performance of the low expectancy group on measures of persistence of attention.

3. a) The conditioned to believe high expectancy group's performance will be greater than the performance of all other groups on measures of persistence.

b) The conditioned to believe high expectancy group's performance will be lower than the performance of all other groups on measures of persistence of attention.

4. a) The conditioned to believe low expectancy group's performance will be lower than the performance of all other groups on measures of persistence.

b) The conditioned to believe low expectancy group's performance will be higher than the performance of all other groups on measures of persistence of attention.

5. The conditioned not to believe high expectancy group and the conditioned not to believe low expectancy group will not differ significantly from each other on measures of persistence or persistence of attention.

6. Because of lack of related research, no predictions will be made about significant differences in persistence or persistence of attention between the high ability and the low ability groups.

7. Because of lack of related research, no predictions will be made about significant differences in the interaction of (a) ability and conditioning, (b) ability and expectancy, or (c) ability, expectancy, and conditioning.

Chapter III

Experimental Method

Design

The design for this study was a 2 x 2 x 2 factorial with conditioning of expectancy as one dimension, type of expectancy statement as the second, and ability group as the third. Two dependent measures were used - persistence and persistence of attention.

		High Expectancy	Low Expectancy
Conditioned to Believe	High Ability		
	Low Ability		
Conditioned not to Believe	High Ability		
	Low Ability		

Method

Subjects

The Ss were 48 first graders, stratified into 2 groups according to reading ability (measured by placement in ability groups based on teacher opinion and kindergarten test results), and randomly divided into two groups, the conditioned to believe (CB) and the conditioned not to believe (CNB).

Materials

The materials for the training period consisted of messages that had to be decoded by matching numbers and letters. Across the top of the page was printed the alphabet with a number from one to twenty-six printed under each letter. The rest of the page contained blanks with numbers written under them. The Ss were required to select the letter that corresponded to that number, and then to write the correct letter in the blank. When done correctly, the message formed a sentence. The sentences were taken from a first grade reader, which, at the time of the experiment, was above the reading vocabulary of all the Ss. This was done so that Ss would be unable to read the message, and therefore, would be unable to determine if they had correctly decoded the message (see Appendix).

The materials used to obtain the dependent measures of persistence and persistence of attention differed from those used during the training period. These were hidden figures pictures taken from commercially prepared magazines. The persistence group received the pictures one at a time, as they were requested. The persistence of attention group received a booklet of six hidden figures pictures, arranged in random order, with the one selected to serve as a covariate as the first one.

Procedure

The CB and CNB group each met with the E for approximately fifteen minutes every day for eight days. The order of groups meeting with the E was varied from day to day. Both groups completed the same three decoding papers each day; although the sentence on each decoding paper was different. For the CB group, the E gave one of two types of expectancy statements, either high or low, where the order of the types of expectancy statements was randomly

determined. Examples of high expectancy statements are:

"You will all do an excellent job on this paper."
"I think you will do really well on this one."
"On this paper everyone will do well."

Examples of low expectancy statements are:

"You will not do very well on this paper."
"I think you will do poorly on this one."
"On this paper, nobody will do well."

The Ss in each group had 2 minutes to complete the task. After completing the paper, the E told the Ss that they performed according to the corresponding expectancy statement. That is, if E told the Ss that they would do well, then after doing the task E would say, "Everybody did a good job," or "Good work," or "You all did excellent work." If E told the Ss that they would not do well, then after doing the task E would say, "You didn't do very well," or "That wasn't very good," or "You did pretty poorly."

The CNB group was given the same expectancy statements as the CB group. However, 50 percent of the time the CNB Ss were told that they did not fulfill the expectancy. For example, after being told they would do well, E either said, "You did well," or "You did not do very well." The order of feedback statements was randomly assigned. Similarly, after being told that they would do poorly, E either said, "You did well," or "You did not do very well." The order of the feedback statements again were randomly assigned.

To determine the effect of the eight day conditioning period on the Ss' responses to the two types of expectancy statements, the Ss were randomly assigned by means of matched

pairs from the two learning groups to one of the two experimental groups, a high expectancy group or a low expectancy group. Thus, four experimental groups were formed, including conditioned to believe low expectancy group, a conditioned to believe high expectancy group, a conditioned not to believe high expectancy group , and a conditioned not to believe low expectancy group. For this section of the study, each child was treated individually rather than in a group. The effect of the expectancy statements was measured in two ways. One half of each group was randomly assigned to a persistency measure, the other half to a persistence of attention measure. All Ss were given the same directions for the hidden figures task, and before doing the task they were required to do a practice exercise. The practice exercise served as the covariate for the persistence of attention group. Following the practice exercise, each S was administered the appropriate expectancy statement for his condition. The Ss in the persistency group were told,

> "Would you like to do another one or would you like to stop now? Remember, the decision is yours. You can stop anytime you want."

When each S finished as many as he chose, he returned to class. The number chosen by each S was recorded. The Ss in the persistence of attention group were required to complete all of the remaining papers in their booklet. The number of figures correctly found was recorded for each S. The Ss in all groups had two minutes to complete each paper.

Chapter IV

Results

A frequency distribution of the data for persistence and persistence of attention was plotted. This showed that each variable had a non-normal distribution. Due to the extremely irregular distribution of the persistence data, a nonparametric test was applied to the data. The Kruskal - Wallis one way analysis of variance was used to test each of the three independent variables. The same test was used to compare individual groups which resulted from the interaction of the three independent variables. No significant differences were found.

Because the distribution of the persistence of attention data was bimodal, the scores were converted to stanines and then an analysis of covariance was carried out. The interaction between conditioning and expectancy was significant ($p<.10$)(see table 1). The Newman - Keuls posttest revealed that the conditioned to believe low expectancy group's performance differed significantly from the performance of the conditioned not to believe low expectancy group ($p<.10$) (see table 2). Inspection of the means (see table 3) indicated that the conditioned not to believe low expectancy group performed better than the conditioned to believe low expectancy group. No other interactions or main effects were significant.

Table 1

ANCOVA

Persistence of Attention

Source	df	ms	F
Conditioning (C)	1	5.54	2.53
Expectancy (E)	1	.01	.01
Reading Ability (R)	1	.44	.20
C X E	1	7.72	3.52*
C X R	1	3.48	1.59
E X R	1	.01	.01
C X E X R	1	1.74	.79
Error	15	2.19	

* $p < .10$

Table 2

Differences

C X E

	High E	Low E
CB		
CNB		↓

Table 3
Means
C X E

	High E	Low E
CB	5.02	3.98
CNB	5.68	6.07

Chapter V
Discussion

The present investigation attempted to determine the effects of conditioning to believe an expectancy statement on an individual's persistence or persistence of attention after expectancy statements were made to learners. Significant differences were found in the interaction between expectancy and conditioning on the persistence of attention measure. The conditioned not to believe low expectancy group and the conditioned to believe low expectancy group differed significantly ($p<.10$), with the conditioned not to believe low expectancy group performing better.

This finding did not support the hypothesis that the conditioned to believe low expectancy group's performance will be higher than the performance of all other groups on measures of persistence of attention. These findings were not consistent with the conclusions of Moore and Holmes (1970) that avoiding failure may be more motivating than obtaining success. The results of the present study, seemed to suggest that conditioning of Ss to an expectancy statement had more of an effect on Ss performance than did avoidance of failure. Specifically, it may have been that, since the Ss were performing in accordance with the low expectancy statement, that this performance was not perceived by the Ss as failure. Having heard a low expectancy statement, the conditioned to believe Ss would expect to do poorly. They would exert little effort, and, as a result, they would do poorly. This statement would have no effect on the conditioned not to believe group since they would not expect to do poorly.

The results of the conditioned not to believe expectancy groups did not differ significantly from each other on either measures of persistence or persistence of attention.

This result supported the hypothesis that the conditioned not to believe expectancy groups will not differ significantly from each other on either measure. Since they were conditioned not to believe, the type of expectancy statement was not expected to influence the behavior of the conditioned not to believe group. No other significant differences were found.

One explanation for the failure to obtain differences in terms of either expectancy or conditioning variables may have been inadequacies in some areas of the design. Specifically, there was some evidence that the believability of the expectancy and reinforcement statements resulted in some Ss being conditioned and others not. During the conditioning period, when told that they had done poorly, several Ss frequently would maintain that they had done well because they had finished. The E explianed to the Ss that they had mistakes in decoding which meant they had done poorly. For a number of Ss, however, the attitude still seemed to exist that finishing was equated more with success than was the E's statement regarding success.

A second factor in the design which may have influenced the results was the group treatment procedure used in conditioning the Ss. Possibly some of the effectiveness of the expectancy statement and feedback was lost in the group situation. For example, the Ss could easily have thought that the statements were meant for others in the group, and not for themselves. Other investigators (Moore & Gagne, 1972; Moore & Means, 1972; Gagne & Biddle, 1972) have found significant differences using similar expectancy statements in an individualized situation. These findings seem to support the hypothesis that some effectiveness of the expectancy statement and feedback may be lost in the group situation.

Thirdly, failure to obtain differences in terms of main effect may have been due to the fact that the present study

made no allowance for individual effort. Specifically, if a child was in the conditioned to believe group, then no matter how well he performed on the task, if he had been given a high expectancy statement, he was given high feedback, and if he had been given a low expectancy statement he was given low feedback. Thus, through their own knowledge of their effort, the Ss could have discounted the expectancy statements and feedback. The findings of Gagne and Biddle (1972) tend to support this explanation. In their investigation, the effort variable was controlled by using a baseline score for each individual. Those Ss in the conditioned group, when given a high expectancy statement, only received high feedback if their score was better than their baseline. Significant differences were obtained, indicating that it may be necessary to control for effort.

In the present study, it was assumed that the conditioning would generalize from one task to the other. However, that may not be the case; conditioning may be task specific. If conditioning were task specific, then this could account for the lack of differences on the main effect variables. In the present study, the task for the conditioning period was different from the one that was used for the persistence and persistence of attention measures. Further research is necessary to investigate the possibiltiy that the Ss were conditioned to the first task, but that this conditioning failed to generalize to a different task.

A fifth possible explanation for the lack of differences in main effects might have been that the Ss might have used the expectancy statement only for the first hidden figures task. After that the Ss could have developed their own expectancy for the next paper based on their own estimation of how they had felt they had done on the first one. Feather (1965) supported this explanation when he found that once a person becomes involved in a task, then his present

performance shapes his expectancies.

Another possible explanation for lack of main effect differences might be that the conditioning of expectancy statements is not sufficient to explain how expectancy statements affect learner performance. It might be that a more general theory of learning is required. It might be that the interaction of expectancy statements and conditioning could be explained in terms of cognitive dissonance and prior conditioning. Some support for this suggestion was obtained by Moore and Means (1972) and Moore and Gagne (1972) who found significant differences only when the conditioned Ss were placed in a dissonant situation.

A possible reason for the lack of differences in the measures of persistence might have been that the testing conditions for the persistence measure were invalid measures of the conditioned behavior. In the conditioning period, reinforcement statements were performance oriented. On the persistence measure the Ss were not measured on their performance on each paper, but on how many papers they had completed. Thus they were measured on a different ability than the one which they had been conditioned on. For the persistence of attention measure, the Ss were measured on their performance on each paper, similar to the behavior required during conditioning.

Conclusion

In conclusion, significant differences were found between the conditioned to believe low expectancy group and the conditioned not to believe low expectancy group on measures of persistence of attention. These differences were not in the hypothesized direction, suggesting that conditioning the Ss to an expectancy statement might have had more of an effect than avoidance of failure. Support

was found for the hypothesis that the conditioned not to believe high expectancy group and the conditioned not to believe low expectancy group will not differ significantly on measures of persistence and persistence of attention. No other significant differences were found. Possible reasons for the lack of differences in main effect include: the believability of the expectancy and reinforcement statements, the group treatment during conditioning, the allowance for individual effort, the conditioning being task specific, the development of one's own expectancy, and the inadequacy of the theory. A possible reason for the lack of differences on the persistence measure was that the behavior required during the persistence measurement was different from that required during conditioning.

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Appendix

20 NAME_____

a	b	c	d	e	f	g	h	i	j	k
1	2	3	4	5	6	7	8	9	10	11

l	m	n	o	p	q	r	s	t	u	v
12	13	14	15	16	17	18	19	20	21	22

w	x	y	z
23	24	25	26

9	4	9	4	14	15	20	6	15	18	7	5	20	

20	15	2	18	9	14	7	13	25	2	9	25		

2	9	7	21	13	2	18	5	12	12	1	.